

1644

**ATTORNEY DOCKET NO.: 2002834-0058 (Peanut Allergens (CIP4 DIV))**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Bannon, et al. Examiner: Huynh, P.  
Serial No.: 09/478,668 Art Unit: 1644  
Filing Date: January 6, 2000  
Title: METHODS AND REAGENTS FOR DECREASING CLINICAL  
REACTION TO ALLERGY

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

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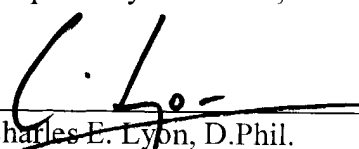
**TRANSMITTAL LETTER**

Enclosed are the following documents:

1. Form PTO-1449 (4 pages);
2. Supplemental Information Disclosure Statement (6 pages);
3. Transmittal Letter (1 page);
4. Limited Recognition Under 37 CFR § 10.9(b); and
5. Return Postcard.

If any additional fees are required to be paid or if any overpayment has been made, please charge same to Deposit Account No. 03-1721.

Respectfully submitted,

  
Charles E. Lyon, D.Phil.  
Agent for Applicant  
Limited Recognition Under 37 CFR §10.9(b)

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Dated: January 29, 2004

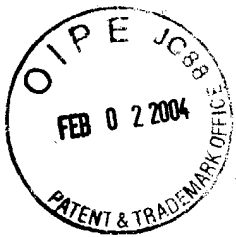
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1-29-04 Sandra Saccoccia  
Date Signature  
Sandra Saccoccia

Typed or Printed Name of person signing certificate



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P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

STATEMENT

Pursuant to the duty of disclosure under 37 C.F.R. §§1.56, 1.97 and 1.98, Applicant requests consideration of this Information Disclosure Statement.

Type of Statement

The present Information Disclosure Statement is:

- ☐ An *original* Information Disclosure Statement; or  
☒ A *supplemental* Information Disclosure Statement.

**Certificate of Mailing**

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1-29-04 Sandra Saccocia  
Date Signature  
Sandra Saccocia

Typed or Printed Name of person signing certificate

Compliance with 37 CFR § 1.97

The present Information Disclosure Statement is being filed:

- ☐ Pursuant to 37 CFR § 1.97(b); no fee or certification is required:
  - ☐ Within three months of the filing date of a national application other than a continued prosecution application under § 1.53(d);
  - ☐ Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application;
  - ☐ Before the mailing of a first Office action on the merits; or
  - ☐ Before the mailing of a first Office action after the filing of a request for continued examination under § 1.114.
- ☐ Pursuant to 37 CFR § 1.97(c) after the dates listed above but before the mailing date of any of a final action under § 1.113, a notice of allowance under § 1.311, or an action that otherwise closes prosecution in the application; Applicant hereby *either*:
  - ☐ Certifies that *either*:
    - ☐ each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement; or
    - ☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the

knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in § 1.56(c) more than three months prior to the filing of the information disclosure statement.; or

☐ Includes herewith the fee set forth in § 1.17(p).

☐ Pursuant to 37 CFR § 1.97(d), after the mailing date of any final action under § 1.113, a notice of allowance under § 1.311, or an action that otherwise closes prosecution in the application; Applicant hereby *both*:

☐ Certifies that *either*:

☐ each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement; or

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in § 1.56(c) more than three months prior to the filing of the information disclosure statement.; and

☐ Includes herewith the fee set forth in § 1.17(p).

Content of the Information Disclosure Statement

Applicant hereby makes of record in the above-identified application the reference(s) listed on the attached form PTO-1449 (modified). The order of presentation of the references should not be construed as an indication of the importance of the references.

Applicant includes copies of references as indicated below:

- ☐ A copy of each cited reference not indicated with an asterisk is included;
- ☒ Copies of references indicated with an asterisk on the attached form PTO-1449 are not included pursuant to 37 CFR § 1.98(d) because they were previously provided to the United States Patent Office in an Information Disclosure Statement that complies with 37 CFR § 1.98(a)-(c) and was submitted in the following patent application that is relied upon in the present case for an earlier effective filing date under 35 USC § 120:

Serial Number	Filing Date	Status
09/141,220	August 27, 1998	Pending

- ☐ Copies of English translations of one or more non-English references are included.

Applicant hereby makes the following additional information of record in the above-identified application:

Applicant certifies that the Information Disclosure Statement *either*:

- ☐ Does not contain non-English language citations;
- ☐ Does contain non-English language citations, of which the following is a concise explanation:
- ☐ Includes one or more translations of a non-English citation.

Remarks

The submission of this Information Disclosure Statement should not be construed as a representation that a search has been made.

The submission of this Information Disclosure Statement shall not be construed to be an admission that the information cited in the statement is, or is considered to be, material to patentability as defined in § 1.56(b) .

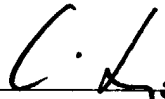
The submission of this Information Disclosure Statement shall not be construed as a representation that the information cited in the Statement is, or is considered to be, in fact, prior art as defined by 35 U.S.C. §102.

It is respectfully requested that:

1. The Examiner consider completely the cited information, along with any other information, in reaching a determination concerning the patentability of the present claims;
2. The enclosed form PTO-1449 be signed by the Examiner to evidence that the cited patent(s) and publication(s) has (have) been fully considered by the Patent and Trademark Office during the examination of this application; and
3. The citations for the patent(s) and publication(s) be printed on any patent which issues from this application.

Notwithstanding any statements by Applicants, the Examiner is urged to form his or her own conclusions regarding the relevance of the cited reference(s).

Respectfully submitted,



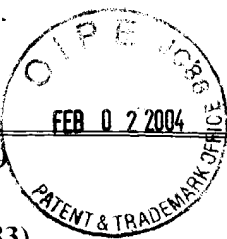
Charles E. Lyon, D.Phil.  
Agent for Applicant  
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Dated: January 22, 2004

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PTO-1449

(REV. 8-83)

U.S. Department of  
Commerce  
Patent and Trademark Office

ATTY. DOCKET:  
**2002834-0058**

IN RE  
APPLICATION NO.:  
**09/478,668**

APPLICANT: Bannon et al.

FILING DATE:  
January 6, 2000

GROUP:  
1644

**SUPPLEMENTAL  
INFORMATION DISCLOSURE STATEMENT**  
(Use several sheets if necessary)

**U.S. PATENT DOCUMENTS**

Examiner's Initials	U.S. Patent No.	Applicant	Issue Date	Class	Subclass
	*5,888,799	Curtiss III	March 30, 1999		
	*5,830,463	Duke, et al.	November 3, 1998		
	*5,389,368	Gurtiss III	February 14, 1995		

**U.S. PATENT APPLICATIONS**

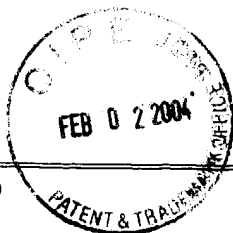
Examiner's Initials:	Serial Number:	Applicant:	Publication Date:	Group:	Art Unit:

**FOREIGN PATENT DOCUMENTS**

Examiner's Initials	Document No.	Country	Date	Translation	
				Yes	No
	*CA 2 158 047	Canada	15 September 1994		
	*CA 2 157 596	Canada	29 September 1994		
	*JP 07095887	Japan	11 April 1995		
	*JP 06253851	Japan	13 September 1994		
	*WO 00/54803	PCT	21 September 2000		
	*WO 99/25387	PCT	27 May 1999		
	*WO 94/20614	PCT	15 September 1994		

**OTHER DOCUMENTS**

Examiner's Initials	Citation (Including Author, Title, Date, Pertinent Pages, Etc.)
	*Burks, et al., "Epitope Specificity of the Major Peanut Allergen, Ara h II", <i>J. Allergy Clin. Immunol.</i> <b>95</b> : 607-611, 1995.
	*Gayler, et al., "Biosynthesis, cDNA and Amino Acid Sequences of a Precursor of Conglutin $\delta$ , A Sulphur-Rich Protein from <i>Lupinus Angustifolius</i> ", <i>Plant Molecular Biology</i> , <b>15</b> : 879-893, 1990.



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(REV. 8-83)

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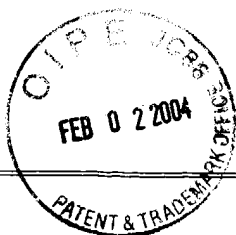
FILING DATE:  
January 6, 2000GROUP:  
1644**SUPPLEMENTAL  
INFORMATION DISCLOSURE STATEMENT***(Use several sheets if necessary)*

Examiner's Initials	Citation (Including Author, Title, Date, Pertinent Pages, Etc.)
	*Ichikawa, et al., "Solution Structure of Der f 2, the Major Mite Allergen for Atopic Disease", <i>J. Mol. Chem.</i> , <b>273</b> : 356-360, 1998.
	*Medaglini, et al., "Mucosal and Systemic Immune Responses to a Recombinant Protein Expressed on the Surface of the Oral Commensal Bacterium <i>Streptococcus Gordonii</i> After Oral Colonization", <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>92</b> (15): 6868-6872, 1995.
	*Nishiyama, et al., "Analysis of the IgE-epitope of Der f 2, a Major Mite Allergen, by in vitro Mutagenesis", <i>Mol. Immunol.</i> , <b>32</b> : 1021-1029, 1995.
	*Nishiyama, et al., "Effects of Amino Acid Variations in Recombinant Der f II on its Human IgE and Mouse IgG Recognition", <i>Int. Arch. Allergy Immunol.</i> , <b>105</b> : 62-69, 1994.
	*Takai, et al., "Effect of Proline Mutations in the Major House Dust Mite Allergen Der f 2 on IgE-binding and Histamine-releasing Activity", <i>Eur. J. Biochem.</i> , <b>267</b> : 6650-6656, 2000.
	*Takai, et al., "Non-anaphylactic Combination of Partially Deleted Fragments of the Major House Dust Mite Allergen Der f 2 for Allergen-specific Immunotherapy", <i>Mol. Immunol.</i> , <b>36</b> : 1055-1065, 1999.
	*Takai, et al., "Determination of the N- and C-terminal Sequences to Bind Human IgE of the Major House Dust Mite Allergen Der f 2 and Epitope Mapping for Monoclonal Antibodies", <i>Mol. Immunol.</i> , <b>34</b> : 255-261, 1997.
	*Takai, et al., "Engineering of the Major House Dust Mite Allergen Der f 2 for Allergen-specific Immunotherapy", <i>Nat. Biotechnol.</i> , <b>15</b> : 754-758, 1997.
	*Vrtala, et al., "Humoral Immune Responses to Recombinant Tree Pollen Allergens (Bet v I and Bet v II) in Mice: Construction of a Live Oral Allergy Vaccine", <i>International Archives of Allergy and Immunology</i> , <b>107</b> : (1-3): 290-294, 1995.
	*EMBL Accession No. L77197 (March 1996)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



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(REV. 8-83)

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**U.S. PATENT DOCUMENTS**

Examiner's Initials	U.S. Patent No.	Applicant	Issue Date	Class	Subclass
	*6,218,371	Krieg et al.	April 17, 2001	514	44
	*5,061,790	Elting et al.	October 29, 1991	530	402
	*4,959,314	Mark et al.	September 25, 1990	435	69.1
	*4,849,404	Iwai et al.	July 18, 1989	514	2
	*4,658,022	Knowles et al.	April 14, 1987	530	402

**U.S. PATENT APPLICATIONS**

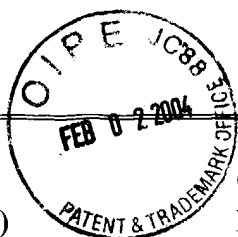
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**FOREIGN PATENT DOCUMENTS**

Examiner's Initials	Document No.	Country	Date	Translation	
				Yes	No

**OTHER DOCUMENTS**

Examiner's Initials	Citation (Including Author, Title, Date, Pertinent Pages, Etc.)
	*Del Val, et al., "Thioredoxin Treatment Increases Digestibility and Lowers Allergenicity of Milk", <i>J. Allergy Clin. Immunol.</i> 103(4): 690-697, 1999.
	*Hoyne, et al., "Peptide-Mediated Regulation of the Allergic Immune Response", <i>Immunol. Cell Biol.</i> 74(2): 180-186, 1996.
	*Vailes, et al., "Fine Specificity of B-Cell Epitopes on Felis Domesticus Allergen I (Fel d I): Effect of Reduction and Alkylation or Deglycosylation of Fel d I Structure and Antibody Binding", <i>J. Allergy Clin. Immunol.</i> 93(1): 22-33, 1994.
	*Burns, et al., "Selective Reduction of Disulfides by Tris (2-Carboxyethyl) Phosphine", <i>J. Org. Chem.</i> 56(8): 2648-2650, 1991.
	*Gray, et al., "Echistatin Disulfide Bridges: Selective Reduction and Linkage Assignment", <i>The Protein Society</i> , 1749-1755, 1993.



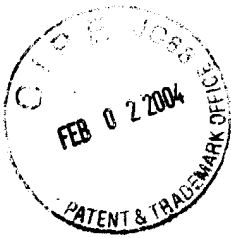
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<b>SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT</b> (Use several sheets if necessary)			APPLICANT: Bannon et al.	
			FILING DATE: January 6, 2000	GROUP: 1644
Examiner's Initials	Citation (Including Author, Title, Date, Pertinent Pages, Etc.)			
	*Gray, et al., "Disulfide Structures of Highly Bridged Peptides: A New Strategy for Analysis", <i>The Protein Society</i> , 1732-1748, 1993.			
	*Herbert, et al., "Reduction and Alkylation of Proteins in Preparation of Two-Dimensional Map Analysis: Why, When, and How?" <i>Electrophoresis</i> , 22: 2046-2057, 2001.			
	*Nakamura, et al., "Mass Spectrometric-Based Revision of the Structure of a Cysteine-Rich Peptide Toxin with Gamma-Carboxyglutamic Acid, TxVIIA, from the Sea Snail, Conus Textile", <i>Protein Science</i> , 5(3): 524-530, 1996.			
	*Olsson, et al., "Contribution of Disulphide Bonds to Antigenicity of Lep d 2, the Major Allergen of the Dust Mite <i>Lepidoglyphus Destructor</i> ", <i>Molecular Immunology</i> , 35: 1017-1023, 1998.			
	*Smith, et al., "Localization of Antigenic Sites on Der p 2 Using Oligonucleotide-Directed Mutagenesis Targeted to Predicted Surface Residues", <i>Clinical and Experimental Allergy</i> , 27: 593-599, 1997.			
	*Smith, et al., "Recombinant Allergens for Immunotherapy: A Der p 2 Variant with Reduced IgE Reactivity Retains T-Cell Epitopes", <i>J. Allergy Clin. Immunol.</i> 101(3): 423-425, 1998.			
	*Smith, et al., "Reduction in IgE Binding to Allergen Variants Generated by Site-Directed Mutagenesis: Contribution of Disulfide Bonds to the Antigenic Structure of the Major House Dust Mite Allergen Der p 2", <i>Molecular Immunology</i> , 33(4/5): 399-405, 1996.			
	*Watson, et al., "Trapping and Identification of Folding Intermediates of Disulfide Bond-Forming Proteins Based on Cyanylation, Cleavage, and Analysis by Mass Spectrometry", <a href="http://www.abrf.org/JBT/Articles/JBT0014/JBT0014.html">http://www.abrf.org/JBT/Articles/JBT0014/JBT0014.html</a> ." Pages 1-12.			
	*Wu, et al., "A Novel Methodology for Assignment of Disulfide Bond Pairing in Proteins", <i>Protein Science</i> , 6(2): 391-398, 1997.			
	*Zhou, et al., "Assignment of Disulfide Bonds in Proteins by Partial Acid Hydrolysis and Mass Spectrometry", <i>Journal of Protein Chemistry</i> , 9(5): 523-532, 1990.			
EXAMINER			DATE CONSIDERED	
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**BEFORE THE OFFICE OF ENROLLMENT AND DISCIPLINE  
UNITED STATES PATENT AND TRADEMARK OFFICE**

**LIMITED RECOGNITION UNDER 37 CFR § 10.9(b)**

Charles Lyon is hereby given limited recognition under 37 CFR § 10.9(b) as an employee of the Choate, Hall & Stewart law firm to prepare and prosecute patent applications wherein the patent applicant is the client of the Choate, Hall & Stewart law firm, and the attorney or agent of record in the applications is a registered practitioner who is a member of the Choate, Hall & Stewart law firm. This limited recognition shall expire on the date appearing below, or when whichever of the following events first occurs prior to the date appearing below: (i) Charles Lyon ceases to lawfully reside in the United States, (ii) Charles Lyon's employment with the Choate, Hall & Stewart law firm ceases or is terminated, or (iii) Charles Lyon ceases to remain or reside in the United States on an H1B visa.

This document constitutes proof of such recognition. The original of this document is on file in the Office of Enrollment and Discipline of the United States Patent and Trademark Office.

**Expires: May 16, 2004**

Harry I. Moatz

Director of Enrollment and Discipline